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EXAMINER

CHAMBERS, TRAVIS SLOAN

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2839

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/572,953
Filing Date: February 21, 2007
Appellant(s): BIRGEL ET AL.

Felix J. D'Ambosio
For Appellant

EXAMINER'S ANSWER

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This is in response to the appeal brief filed 02/12/2010 appealing from the Office action mailed 04/07/2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 50-52.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,585,903	Belke, Jr. et al.	7-2003
6,523,257	Kokubun et al.	2-2003
4,185,378	Machida	1-1980

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 50 and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Belke, Jr. et al. (US 6585903 B1).

With respect to claim 50, Belke teaches a method for manufacturing a circuit board having at least one connection bore for receiving a connection wire, or pin, of an electronic component of a predetermined wire, or pin, diameter, comprising the steps of: manufacturing a circuit board (210 ; figure 12) with at least one ply, or layer; drilling a blind hole (212 ; figure 12) with a drilling tool having a desired diameter, into the circuit board (210) at a location desired for the connection bore; and drilling through the floor of the blind hole (212) with a drilling tool having a diameter smaller than the wire, or pin, diameter, in order to form a second bore (218 ;figure 12), so that a narrowing created thereby in the cross section of a part of the connection bore forms a holding mechanism (opening space created by 218 ; figure 12) for secure holding of the connection wire, or pin.

In particular reference to the recitation "for secure holding", this is seen to be for the intended use of the claimed structure and are given little patentable weight. Further, the recitation is not seen to claim any structure that prevents the reference from being used for the same purpose as the intended use recitations of the claim.

With respect to claim 52, Belke teaches a method for manufacturing a circuit board having at least one connection bore for receiving a connection wire, or pin, of an electronic component of a predetermined wire, or pin, diameter, comprising the steps of: manufacturing a circuit board (150 ; figure 9) with at least one ply, or layer; drilling a first blind hole (152 ;figure 9), at a location desired for the connection bore (154 ;figure

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9), into the circuit board (150) from a first surface of the circuit board (150) with a drilling tool of a desired diameter; and drilling a second blind bore (A; image below) from a second surface (bottom surface of 150) of the circuit board (150), into the circuit board (150) a second, which is arranged essentially axially parallel and aligned with the first blind hole (152) and which meets the first blind hole (152) but does not extend completely into it, so that, in a portion of the connection bore (154), where the two blind holes (154 and A) meet one another, a restriction is formed, which represents a holding mechanism (near lead line 156 ; figure 9) for secure holding of the connection wire, or pin.

In particular reference to the recitation "for secure holding", this is seen to be for the intended use of the claimed structure and are given little patentable weight. Further, the recitation is not seen to claim any structure that prevents the reference from being used for the same purpose as the intended use recitations of the claim.

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kokubun et al. (6523257 B1) in view of Machida (4185378).

With respect to claim 51, Kokubun teaches a method for manufacturing a circuit board having at least one connection bore for receiving a connection wire, or pin, of an electronic component of a predetermined wire, or pin, diameter, comprising the steps of: manufacturing a circuit board (herein embodiment of figure 1) with at least one ply, or layer; a first blind hole (upper portion of 6; figure 1) at a location desired for the connection bore (6 ; figure 1), into the circuit board from a first surface (top surface of

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embodiment of figure 1) of the circuit board; and a second blind hole (bottom portion of 6 ; figure 1) from a second surface (bottom surface of embodiment of figure 1) of the circuit board, into the circuit board, which is arranged slightly offset from the first blind hole (upper portion of 6; figure 1) and which meets the first blind hole (upper portion of 6; figure 1), so that, by the offset of the two blind holes (upper and lower portion of 6 ; figure 1) relative to one another, a restriction is formed, which represents a holding mechanism for secure holding of the connection wire, or pin.

However Kokubun does not teach using a drilling tool of a desired diameter.

Machida teaches using a drilling tool (B; figure 6a) of a desired diameter.

Therefore one of ordinary skilled in the art would have been motivated to use the teachings of Machida because it better facilitates creating a desired shaped hole by allowing better control of the depth the drill penetrates the circuit board.

In particular reference to the recitation "for secure", this is seen to be for the intended use of the claimed structure and are given little patentable weight. Further, the recitation is not seen to claim any structure that prevents the reference from being used for the same purpose as the intended use recitations of the claim.

(10) Response to Argument

- - Regarding Brief page 4, lines 16-22, the argument concerning "...One can understand this position if the reference to a wire or pin in claim 50 is ignored.

However, it should not be ignored; and it appears rather conclusive from the Belke, Jr. et al. teaching that Belke, Jr et al. has nothing to do with a wire or pin, so that the

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method of claim 50, which is aimed at manufacturing a circuit board 'for receiving a connection wire, or pin..' cannot be anticipated by Belke, Jr. et al. ..", examiner respectfully disagrees. The circuit board of Belke Jr., et al. is capable of securely holding a connection wire, or pin. Further Belke Jr., et al. teaches the manufacturing steps for drilling blind holes in the circuit board (see Col. 8, lines 44-67 through Col. 9, lines 1-4).

- - Regarding Brief page 5, line 8, the argument concerning "...The same can be said for claim 52..." examiner respectfully disagrees with the related arguments. The circuit board of Belke Jr., et al. is capable of securely holding a connection wire, or pin. Further Belke Jr., et al. teaches the manufacturing steps for drilling blind holes in the circuit board (see Col. 7, lines 12-15).

- - Regarding Brief page 6, lines 2-24, the argument concerning "... This is totally different from the subject matter of pending claim 51. First, the circuit board according to Kokobun et al. requires multiple layers. The circuit board according to pending claim 51 may even consist of a single layer....." examiner respectfully disagrees. From the recitation "a circuit board with at least one ply, or layer" in claim 51, it was seen as the circuit board having one or more plies or layers. Further Kokubun et al. teaches of the offset structure of in a circuit board that is capable of securely holding a connection wire or pin. The combination with Machida is for a drilling tool, where the drilling tool is capable of creating the desired hole.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Travis Chambers

Art Unit 2839

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